

Welcome to the FEMA Building Science Multi-Hazard Design Concepts Video Series

The mission of the Federal Emergency Management Agency (FEMA) is to work together with U.S. citizens and first responders to build, sustain, and improve our capability to prepare for, protect against, respond to, recover from, and mitigate all hazards, as a nation.

Educating disaster workforces and the people who live in at-risk communities about natural hazards and ways to mitigate associated risks is an important way to support this mission. To fulfill its mission of support and education, FEMA produces myriad training materials.

This CD contains the FEMA Building Science Multi-Hazard Mitigation and Design Concepts video series. It contains three videos of abridged content on hazard mitigation design and concepts based on the FEMA 4-day training course E312: “Fundamentals of Building Science – Multi-Hazard Mitigation and Design Concepts.” The three videos are:

1. Earthquake
2. Flood
3. Wind

This series will teach you the following about earthquake, flood, and wind hazards: basic hazard characteristics, potential magnitudes, typical types of damage to the building environment, mitigation options and techniques, and design concepts. The videos also have referrals to related technical guidance and resources.

Each video explains the topic, the hazard related damage and some common-sense tools to assist with specific mitigation work. The target audience includes FEMA disaster workforce, State and local community disaster mitigation, response and recovery professionals and citizens living in areas with high risk of earthquake, flood, or wind.

Earthquake

The video has a short introduction illustrated by a recent earthquake event. It discusses the main hazards that arise from seismic events, the types of earthquake damage commonly seen in buildings and other structures, and seismic design basics. The discussion includes how buildings resist earthquakes, design criteria, and the process of seismic design for new and existing construction.

Flood

The video presents an introduction to flood hazards for different areas of the country and describes how to identify those hazards. It goes on to discuss the impact of floods on the constructed environment, basic principles of flood hazard-resistant design and construction, and mitigation measures.

Wind

The video discusses the wind characteristics that are important to consider in design. It then explains wind exposure factors, how to identify wind hazards and common types of wind damage, the wind design process, and mitigation techniques.

Acknowledgements

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Earthquake Video

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Flood Video

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Wind Video

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